

ABSTRACT

Pulse excitation light, emitted from a laser light source 10, is scanned in a first direction by a first scanning means 100, scanned in a second direction, 5 perpendicular to the first direction, by a second scanning means 120, converged by an objective optical system 140, and illuminated onto sample 50. Fluorescences, emitted from sample 50, are output from objective optical system 140 to second scanning means 120, scanned in the second direction, perpendicular to the first direction, and output to a light separation means 110 by second scanning means 120, output from light separation means 110 to a streak camera, and recorded as variations of time of the fluorescence 10 intensities by streak camera 30. Fluorescence lifetimes are calculated based on these variations with 15 time of the fluorescence intensities and a fluorescence lifetime distribution image is prepared.